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Dkt. 00248CONT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: Group Art Unit: 1732

TOSHIKAZU ITO Examiner: E. Lee

Serial No: Continuation of 09/229,990

Filed: concurrently herewith

For: PANEL WITH A FRAME AND METHOD FOR MANUFACTURING THE SAME

PRELIMINARY AMENDMENT

Honorable Commissioner of Patents and Trademarks
Washington, DC 20231

Sir:

Before calculation of the filing fee, please amend the above-identified application as follows:

IN THE TITLE:

Please amend the title to read: --METHOD FOR MAKING WINDOW PANEL UNITS HAVING IN SITU EXTRUDED FRAMES--.

IN THE ABSTRACT:

Please cancel page 34 of the application, and add the following abstract:

ABSTRACT OF THE DISCLOSURE

A method of manufacturing a panel unit including a panel and a directly extruded molding. The peripheral edge of a panel is moved along a predetermined orbital path with respect to an extrusion port of a molding die, and a resin molding material is simultaneously extruded directly onto the peripheral edge of the panel. The directly extruded molding has a predetermined external dimension, irrespective of the external dimension of the panel.

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IN THE DRAWINGS:

Please amend Figures 16-18 as shown on the attached sheet.

IN THE SPECIFICATION:

Page 1, delete lines 4-7, and replace therewith:

--This application is a continuation of pending application Serial No. 09/229,990 filed January 14, 1999, which is a continuation of Serial No. 08/372,320 filed January 13, 1995, now US Patent No. 6,106,931, which is a continuation of Serial No. 08/088,520 filed July 7, 1993, now US Patent No. 5,411,696, which is a continuation-in-part of Serial No. 07/727,945 filed July 10, 1991, now abandoned.--

From page 24, line 24 to page 25, line 25, please amend the specification to read as follows:

--As shown in FIG. 16, if the longitudinal length of the window glass 3 is L2, which is the ideal longitudinal length m, the molding 5 is formed along the peripheral edge of the window glass 3 so that the longitudinal length of the panel unit 2 conforms to an ideal length M. As further shown in FIG. 16, the molding 5 has a longitudinal width W. A distance H1 is defined between a first peripheral edge of the window glass 3 and the outer peripheral edge of the molding 5 and a distance H2 is defined between a second peripheral edge of the window glass and the corresponding outer peripheral edge of

the molding 5. By moving the window glass 3 along a predetermined orbit with respect to the extrusion port 21, the in situ formed molding 5 of the panel unit 2 will always have ideal external dimensions, regardless of variations in the size of the window glass 3.

As shown in FIG. 17, even if the longitudinal length of the window glass 3 is L1, which is less than the ideal longitudinal length m, the molding 5 is formed along the peripheral edge of the window glass 3 so that the longitudinal length of the panel unit 2 still conforms to the ideal length M. FIG. 17 shows that the length L1 of the window glass 3 is less than the ideal length m by the amount A (i.e., distances H1 and H2 of FIG. 17 are greater than distances H1 and H2 of FIG. 16) and the in situ molding 5 formed by moving the window glass 3 in a predetermined orbital path compensates for the difference A/2 at each side of the window glass 3 to provide a panel unit 2 having the ideal external dimensions.

Further, as shown in FIG. 18, even if the longitudinal length of the window glass 3 is L3, which is greater than the ideal longitudinal length m, the molding 5 is formed along the peripheral edge of the window glass 3 so that the longitudinal length of the panel unit 2 still conforms to the ideal constant length M. FIG. 18 shows that the length L3 of the window glass 3 is greater than the ideal length m by the

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amount B (i.e., distances H1 and H2 of FIG. 18 are less than distances H1 and H2 of FIG. 16) and the in situ molding 5 formed by moving the window glass 3 in a predetermined orbital path compensates for the difference B/2 at each side of the window glass 3 to provide a panel unit 2 having the ideal external dimensions.

As described above, even if there is a variation in the external dimension of the window glass 3, the molding 5 effectively compensates for the variation without departing from the ideal external dimension of the in situ formed molding 5, thereby permitting the consistent formation of panel units 2 having uniform external dimensions.--

IN THE CLAIMS:

Please cancel claims 2-7 without prejudice or disclaimer of the subject matter thereof, and insert the following new claims:

--8. A method of manufacturing a panel unit comprising a panel and a directly extruded molding, comprising:

moving a peripheral edge of a panel along a predetermined orbital path with respect to an extrusion port of a molding die; and

simultaneously extruding a resin molding material directly onto the peripheral edge of the panel,

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wherein the directly extruded molding has a predetermined external dimension, irrespective of the external dimension of the panel.

9. A method as in claim 8, further comprising continuously moving the extrusion port relative to the panel and simultaneously bonding the resin molding material to the peripheral edge of the panel.

10. A method as in claim 8, further comprising stopping the extrusion of the resin molding material when the directly extruded molding is formed along almost the entire peripheral edge of the panel and eliminating an irregular portion of the directly extruded molding, wherein a gap is formed between a first and second terminal end of the directly extruded molding.

11. A method as in claim 10, further comprising mounting an additional molding piece in the gap, wherein the directly extruded molding and the additional molding piece form a continuous molding around the entire peripheral edge and four corners of the panel.

12. A method as in claim 8, wherein the panel is an automobile window glass.

13. A method as in claim 12, further comprising stopping the extrusion of the resin molding material when the directly extruded molding is formed along almost the entire peripheral

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edge of the automobile window glass and eliminating an irregular portion of the directly extruded molding, wherein a gap is formed between a first and second terminal end of the directly extruded molding.

14. A method as in claim 13, further comprising mounting an additional molding piece in the gap, wherein the directly extruded molding and the additional molding piece form a continuous molding around the entire peripheral edge and four corners of the automobile window glass.

15. A method as in claim 8, wherein the peripheral edge of the panel is disposed proximally to the extrusion port during the extrusion molding step.

16. A method as in claim 15, wherein the peripheral edge of the panel is inserted into the extrusion port during the extrusion molding step.

17. A method as in claim 16, wherein the panel is an automobile window glass.

18. A method as in claim 17, further comprising stopping the extrusion of the molding material when the directly extruded molding is formed along almost the entire peripheral edge of the automobile window glass and eliminating an irregular portion of the directly extruded molding, wherein a gap is formed between a first and second terminal end of the directly extruded molding that exposes a portion of the

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peripheral edge of the automobile window glass.

19. A method as in claim 18, further comprising mounting an additional molding piece in the gap, wherein the directly extruded molding and additional molding piece together extend around the entire peripheral edge and four corners of the automobile window glass.

20. A method as in claim 8, wherein the extrusion port is fixed in position and the panel is rotated, such that the peripheral edge of the panel follows the predetermined orbital path.

21. A method as in claim 20, wherein the peripheral edge of the panel is disposed proximally to the extrusion port during the extrusion molding step.

22. A method as in claim 21, wherein the peripheral edge of the curved panel is inserted into the extrusion port during the extrusion molding step.

23. A method of manufacturing a panel unit comprising a panel and a directly extruded molding having a predetermined ideal outer dimension, even if the external dimension of the panel varies from an ideal external dimension, comprising extruding a molding material from a molding die directly onto a peripheral edge of the panel by moving the peripheral edge of the panel along a predetermined path with respect to the molding die, wherein the predetermined path defines the ideal

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outer dimension of the directly extruded molding.

24. A method as in claim 23, further comprising continuously moving the molding die relative to the panel and simultaneously bonding the molding material to the peripheral edge of the panel.

25. A method as in claim 24, wherein the panel is an automobile window glass.

26. A method as in claim 25, further comprising stopping the extrusion of the molding material when the directly extruded molding is formed along almost the entire peripheral edge of the automobile window glass and eliminating an irregular portion of the directly extruded molding, wherein a gap is formed between a first and second terminal end of the directly extruded molding.

27. A method as in claim 26, further comprising mounting an additional molding piece in the gap, wherein the directly extruded molding and the additional molding piece form a continuous molding around the entire peripheral edge and four corners of the automobile window glass.

28. A method as in claim 23, wherein the peripheral edge of the panel is disposed proximally to the molding die during the extrusion molding step.

29. A method as in claim 28, wherein the peripheral edge of the panel is inserted into the molding die during the

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extrusion molding step.

30. A method as in claim 29, wherein the panel is an automobile window glass.

31. A method as in claim 30, further comprising continuously moving the peripheral edge of the automobile window glass relative to the molding die and simultaneously bonding the molding material to the peripheral edge of the automobile window glass.

32. A method as in claim 31, further comprising stopping the extrusion of the molding material when the directly extruded molding is formed along almost the entire peripheral edge of the automobile window glass and eliminating an irregular portion of the directly extruded molding,

wherein a gap is formed between a first and second terminal end of the directly extruded molding that exposes a portion of the peripheral edge of the automobile window glass.

33. A method as in claim 32, further comprising mounting an additional molding piece in the gap, wherein the directly extruded molding and additional molding piece together extend around the entire peripheral edge and four corners of the automobile window glass.

34. A method as in claim 23, wherein the extrusion port is fixed in position and the panel is rotated, such that the peripheral edge of the panel follows the predetermined orbital

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path.

35. A method as in claim 34, wherein the peripheral edge of the panel is disposed proximally to the molding die during the extrusion molding step.

36. A method as in claim 35, wherein the peripheral edge of the panel is inserted into the molding die during the extrusion molding step.

37. A method of manufacturing a panel unit including a window glass panel, and a frame mounted on a peripheral edge of the window glass panel, comprising:

providing a molding die having an extrusion port for extruding a molding material to form the frame, wherein the extrusion port has an inner circumferential surface that corresponds the cross section of the frame,

disposing the peripheral edge of the window glass panel proximally with respect to the extrusion port in order to form a molding space defined by the peripheral edge of the window glass panel and the inner circumferential surface of the extrusion port, wherein the molding space corresponds to the cross section of the frame;

extruding the molding material into the molding space; and

continuously moving the window glass panel relative to the molding die so that the peripheral edge of said window

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glass panel moves along a predetermined orbital path with respect to the extrusion port of the molding die, thereby forming a panel unit having a predetermined external dimension.--

AFTER CALCULATION OF THE FILING FEE, PLEASE CANCEL CLAIM 1 WITHOUT PREJUDICE OR DISCLAIMER OF THE SUBJECT MATTER THEREOF.

REMARKS

The specification and drawings have been amended to correct typographical errors and to clarify the disclosure. The subject matter which has been added is supported by the original drawings; no new matter has been added.

In addition, a new title and a new abstract, more descriptive of the subject matter of the invention, have been added.

Respectfully submitted,

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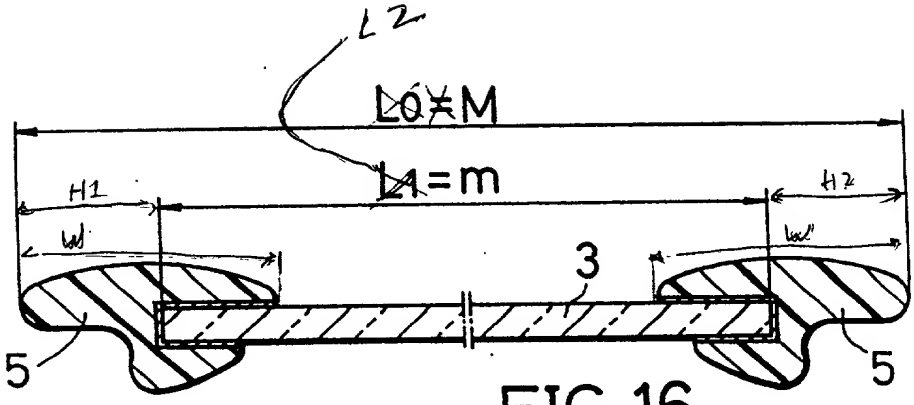

FIG.16

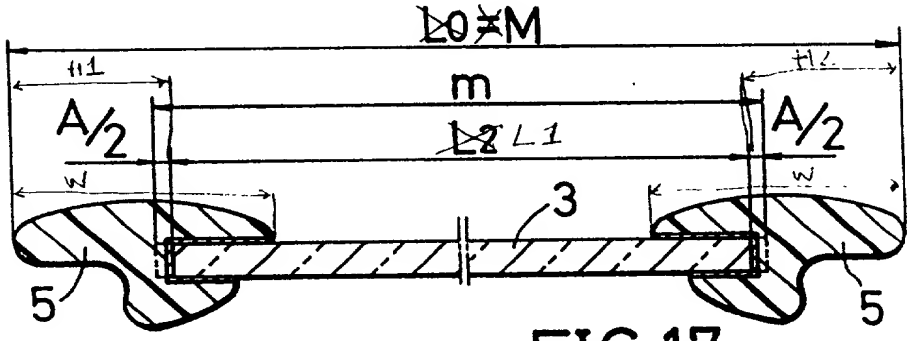

FIG.17

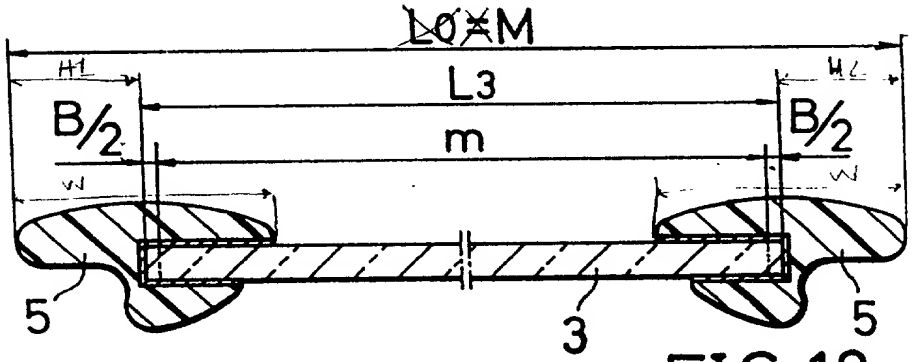

FIG.18

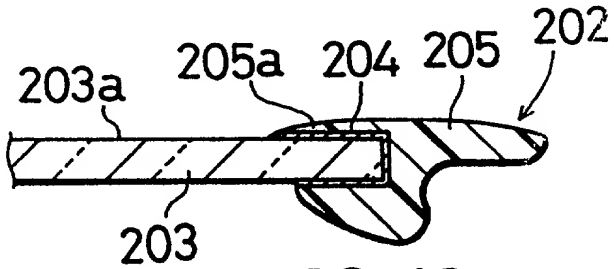

FIG.19